

REMARKS

Claims 23-34 and 36-43 are pending herein. Claim 35 has been canceled, the subject matter thereof having been incorporated into independent claim 23.

1. Claim 27 was rejected under Section 112, second paragraph. Claim 27 has been amended herein to remove this rejection, by clarifying that the substrate comprises a nickel alloy, Inconel simply being a species thereof. Accordingly, withdrawal of the Section 112 second paragraph rejection is respectfully requested.

2. Claims 23-25, 28-34, 37-40 and 42-43 were rejected under Section 102(e) over Mannhart et al. This rejection is moot in view of the incorporation of the subject matter of claim 35 into claim 23.

3. Claims 26-27, 35-36, 38-41 and 43 were rejected under Section 103(a) over Mannhart et al. This rejection is respectfully traversed for the following reasons.

The claimed invention is drawn to a superconductive article comprising a substrate tape and a superconductive layer. The superconductive layer includes a plurality of superconductive films formed of the same material. Those films are individually identifiable and include at least three films disposed one atop another and in direct contact with each other. While the PTO has relied upon Mannhart et al. for allegedly suggesting a structure including at least three superconductive films in direct contact with each other, this reference neither discloses, suggests nor even remotely enables such a structure. More particularly, turning to Fig. 5 of Mannhart et al., a structure is disclosed in which first and second superconductive sheets are apparently in contact with each other. However, this structure is limited strictly to first and second sheets. In this respect, Fig. 5 discloses a structure in which two repeating sub-structures composed of a substrate, a buffer layer system, and a superconductive layer, are placed in a face-to-face relationship. The superconductive sheets are fabricated through a deposition process in which superconductive material is deposited on a buffer layer system which has a desired biaxial texture. The first and second components each composed of a substrate, a buffer layer system and a superconductive layer are then placed in a face-to-face relationship. Given the method of manufacture and the necessity of having a buffer layer in contact with each of the

superconductive sheets, one of ordinary skill in the art would not have found it even remotely obvious to incorporate a third sheet in direct contact with the first and second superconductive sheets. Fig. 6 of the reference supports this reading of Mannhart et al., teaching requisite incorporation of an intermediate sheet between superconductive sheets. Fig. 6 teaches away from a three layer structure as claimed.

Applicants acknowledge the statements in the Office Action on page 4, last paragraph that it would have allegedly been obvious to duplicate the multiple layers disclosed in Fig. 5, since it is well understood that mere duplication of parts involves only routine skill in the art. However, in this case, duplication of essential working parts would result in duplication of the repeating unit cell shown in Fig. 5, composed of a substrate, a buffer layer and a superconductive layer. There is no teaching or even remote suggestion of incorporating an additional superconductive layer, or even teaching of any process conditions to enable the incorporation of an additional superconductive layer without the attendant duplication of its substrate and buffer layer. That is, Fig. 5 clearly discloses and is limited to a two component structure including only first and second superconductive layers in direct contact, while the embodiments shown in Fig. 6 teaches a multilayer structure including six superconducting sheets, but clearly relies upon an intervening intermediate layer to enable the formation of such a structure. Modification of the structure shown in Fig. 5 to incorporate an additional superconductive sheet is disclosed in Mannhart et al., but such a structure is limited to that shown in Fig. 6, which is clearly outside the scope of the claimed invention.

In summary, Applicants acknowledge that Fig. 5 discloses a two-layer superconductive structure, in which the layers are in direct contact with each other, while Fig. 6 discloses a multilayer (six-layer superconductive structure). However, that structure relies upon intermediate layers, and the reference does not teach or even remotely suggest at least three superconductive layers in direct contact with each other.

For at least the forgoing reasons in view of the amendments to the present claims, Applicants respectfully submit that the presently claimed would not have been obvious over Mannhart et al. Accordingly, withdrawal of the Section 103 rejection over Mannhart et al. is respectfully requested.

Applicants respectfully submit that the present application is now in condition for allowance. Accordingly, the Examiner is requested to issue a Notice of Allowance for all pending claims.

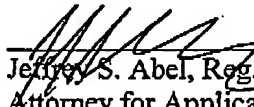
Should the Examiner deem that any further action by the Applicants would be desirable for placing this application in even better condition for issue, the Examiner is requested to telephone Applicants' undersigned representative at the number listed below.

The Commissioner is hereby authorized to charge any fees which may be required, or credit any overpayment, to Deposit Account Number 50-3797.

Respectfully submitted,

Date

11/27/06

  
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